

Appl. No. 10/802,614

Attorney Docket No. 14846-53

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REMARKS

In view of the above amendments, Claims 1, 3-11 and 13-20 are pending in the present application, of which Claims 1 and 11 are in independent form. Claim 1 is amended to recite the subject matter set forth in original Claim 2. Claim 11 is amended to recite the subject matter set forth in original Claim 12. Accordingly, Claims 2 and 12 are cancelled. Claim 11 is further amended to overcome the 35 U.S.C. §112, second paragraph rejection. Claims 3, 7, 10, 13, 17 and 20 are amended to establish proper claim dependency. For at least the reasons set forth in detail below, Applicants respectfully submit that Claims 1, 3-11 and 13-20 are in condition for allowance.

Rejection under 35 U.S.C. § 103(a)

In the Office Action, Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as obvious over Jagadish et al., Timber: A Native XML Database, 2002 (herein, "Jagadish") in view of U.S. Patent Publication No. 2004/0060006 (herein "Lindblad"). It is well-established that in order to establish a *prima facie* case of obviousness, the prior art references, considered individually or in combination, must teach or suggest all of the Applicants' claim limitations. (See MPEP 2142). For at least the reasons set forth below, Applicants respectfully submit that the cited combination of references fails to teach or suggest each and every element of Claims 1, 3-11 and 13-20.

The present application relates generally to methods and systems for updating a collection of tree data structures. (Applicants' application as published, U.S. Patent Publication No. 2005/0065964, paragraph [0165]). The update is performed by identifying one or more trees in a collection of tree data structures which are to be deleted. (U.S. Patent Publication No. 2005/0065964, paragraph [0025]). The one or more trees that are to be deleted are identified by applying a query tree to the collection of trees. (U.S. Patent Publication No. 2005/0065964, paragraph [0025]). According to the present invention, the query tree is generated using a mask

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applied to a set of input tree-structured data. (U.S. Patent Publication No. 2005/0065964, paragraph [0088]).

Claims 1 and 11 are amended to call for "generating a query tree having a tree data structure by applying a mask to the input data to generate the query tree, the mask and the input data each corresponding to a tree data structure" (See amended Claims 1 and 11, emphasis added). Clearly, the mask and the query tree(s) are two separate, independent, and distinct elements of the claimed invention, wherein the mask (a single tree as shown in Figure 16) is used to generate the one or more query trees (as shown in Figure 18).

The relationship between the two distinct elements, the mask and the query tree, is evidenced by the following excerpt from the present application:

"Thus, instead of making a query tree that matches the results directly, a mask is generated that is applied to the input data in order to generate one or more query trees (or patterns). When this mask is applied to the collection of trees in the database, it identifies only those trees that must be deleted in order to complete the update."

(U.S. Publication No. 2005/0065964, paragraph [0175]). As demonstrated by the above, the mask may be used to first prune the collection of trees to generate one or more query trees. The query tree(s) may then be applied to the collection to identify the tree(s) to be deleted from the database as part of the update operation.

In contrast to the pending claims, neither Jagadish nor Lindblad teach or suggest the use of a mask to generate one or more query trees. Instead, Jagadish describes using a pattern tree to create a set of witness trees from a database of trees. (Jagadish, page 278, column 1, last paragraph). Jagadish's 'pattern tree' is merely an input to the process, and is not generated using a mask.

The Office Action treats the two elements of the claimed invention (the mask and the query tree(s)) as a single element, as demonstrated by the assertions set forth in the Office

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Action. In the Office Action, the Examiner indicates that the "pattern tree" of Jagdish is equivalent to the Applicant's query tree. (Office Action, page 3, section 7). However, the Office Action further asserts that Jagdish's "pattern tree is equivalent to Applicant's 'mask'." (quoting Office Action, page 5, paragraph 5). In sum, the Office Action is relying on a single element of Jagdish (the pattern tree) as representing two independent elements of the present invention (the mask and the query tree).

Furthermore, the Office Action is devoid of any showing that Lindblad teaches or suggests the use of a mask to generate one or more query trees. Because the cited references, considered alone or in combination, fail to teach or suggest each and every element of amended Claims 1 and 11, and all claims depend thereon, the Applicants respectfully request that the §103(a) rejection based on the combination of Jagdish and Lindblad be withdrawn. For at least the reasons set forth above, Claims 1, 3-11, and 13-20 are deemed to be in condition for allowance. Reconsideration and favorable action in this regard is earnestly solicited.

Respectfully submitted,



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